

RATIONAL EXPRESSIONS

Frequency: ★★

I. Domain of Rational Functions

Input values that result in a denominator equal to zero are excluded from the domain.

$$f(x) = \frac{3}{(x-5)(x+2)}$$

Values excluded from domain: $x = \underline{\hspace{1cm}}, \underline{\hspace{1cm}}$

x can be any value but $\underline{\hspace{1cm}}$ or $\underline{\hspace{1cm}}$.

II. Simplifying Rational Expressions

$$\frac{x^2 - 4x + 3}{(x-3)(x+1)} \rightarrow \frac{(\hspace{1cm})(\hspace{1cm})}{(x-3)(x+1)}$$

$$\rightarrow \underline{\hspace{2cm}}$$

III. Finding a Common Denominator

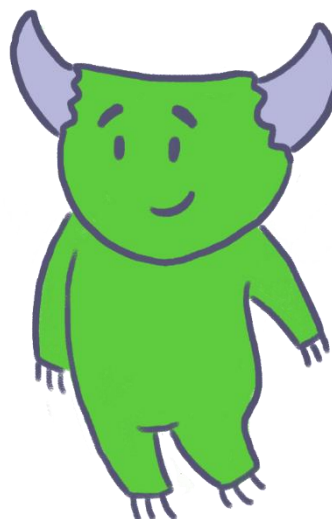
$$\frac{3}{x} - \frac{2}{x+5}$$

$$\rightarrow \frac{3(\hspace{1cm})}{x(\hspace{1cm})} - \frac{2(\hspace{1cm})}{(x+5)(\hspace{1cm})}$$

$$\rightarrow \frac{\hspace{2cm}}{x(x+5)}$$

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HOW WILL THIS LOOK ON THE ACT?

$$\frac{5x^2 - 20}{3(x-2)}$$

$$\rightarrow \frac{5(\hspace{1cm})}{3(x-2)}$$

$$\rightarrow \frac{5(\hspace{1cm})(\hspace{1cm})}{3(x-2)}$$

$$\rightarrow \underline{\hspace{2cm}}$$